

## REMARKS

Claims 1, 23, and 25 are pending in this application, are in independent form, and have been amended to define more clearly what Applicants regard as their invention. Claims 5 and 7 have been canceled, without prejudice or disclaimer of subject matter.

First, it is noted that a telephone interview between the Examiner and the undersigned attorney was conducted on January 22, 2007. During that interview, the Examiner expressed his tentative agreement that if Claims 1, 23, and 25 were amended as set forth herein, they would be distinguishable over the art of record.

Claims 23 and 25 were rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

### The § 101 rejection set out at paragraphs 4 and 5 of the Office Action

At paragraphs 4 and 5 of the Office Action, the Examiner rejected Claims 23 and 25 as non-statutory for supposedly being directed to abstract ideas that do not involve the "technological arts."

Although no authority is cited for the proposition that 35 U.S.C. § 101 requires the claims to involve the "technological arts," Applicants presume that the Examiner is applying the holding of cases such as *Ex Parte Bowman*, 61 U.S.P.Q.2d 1669 (Bd. Pat. App. & Int. 2001) (non-precedential). However, the U.S. Court of Appeals for the Federal Circuit has never held this to be a requirement under 35 U.S.C. § 101 and did not mention such a requirement in its most important cases addressing statutory subject matter,

- such as *State Street Bank & Trust v. Signature Financial Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998) and *AT&T Corp. v. Excel Comm.*, 172 F.3d 1352 (Fed. Cir. 1999).

The Board of Patent Appeals and Interferences has recently recognized that the "technological arts" test is without basis in the law:

Our determination is that there is currently no judicially recognized separate "technological arts" test to determine patent eligible subject matter under 35 U.S.C. § 101. We decline to create one. Therefore, it is apparent that the examiner's rejection can not be sustained.

*Ex Parte Lundgren*, 76 U.S.P.Q.2d (BNA) 1385, 1388 (Bd. Pat. App. & Int. 2005) (per curiam) (precedential). Moreover, the Board in *Lundgren* expressly noted that *Bowman* is a non-precedential opinion without binding authority, thereby effectively overruling *Bowman*. *Id.* at 1387.

Additionally, the U.S.P.T.O. has recently issued new interim guidelines entitled "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" which were signed on October 26, 2005 by Commissioner Doll. These guidelines can be found on the U.S.P.T.O. website at:

[http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101\\_20051026.pdf](http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf)

Annex III on page 42 of these guidelines entitled "Improper Tests For Subject Matter Eligibility" states that the so-called "not in the technological arts" test is not to be applied by examiners in determining whether the claimed invention is patent eligible subject matter, because "Title 35 of the United States Code does not recite, explicitly or implicitly, that inventions must be within the 'technological arts' to be patentable." The Examiner's attention is also directed to MPEP § 2106(IV)(D), which refers to Annex III for

“further discussion of case law defining the line between eligible and ineligible subject matter, as well as a summary of improper tests for subject matter eligibility...”

**The § 101 rejection set out at paragraph 6 of the Office Action**

At paragraph 6 of the Office Action, the Examiner rejected Claims 23 and 25 as non-statutory, stating:

The claimed invention is so abstract and sweeping as to cover the method if practiced by human operator assisted only by pencil and paper. The claims do not include a particular machine or apparatus, and no machine-implemented steps are recited, the steps are capable of performance by the human mind. A method of this sort, traditionally called a mental process, is not patentable subject matter.

A phenomena of nature, though just discovered, mental process, abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work...

To meet the requirements of 35 U.S.C. § 101, “[t]he claimed invention as a whole must accomplish a practical application. That is, it must produce a ‘useful, concrete and tangible result.’” M.P.E.P. § 2106(II)(A) (quoting *State Street Bank & Trust v. Signature Financial Group, Inc.*, 149 F.3d 1368, 1373, 47 USPQ2d 1596, 1601 (Fed. Cir. 1998)).

Claim 23 is directed to an image coding method of quantizing a predetermined number of orthogonal transformation factors, and includes (1) a first scan conversion step of rearranging the orthogonal transformation factors in a first scan sequence which is different from a zigzag scan sequence and outputting the predetermined

number of the rearranged orthogonal transformation factors at a time, and (2) a second scan conversion step of rearranging quantized orthogonal transformation factors in the zigzag scan sequence and outputting the rearranged quantized orthogonal transformation factors.

It is submitted that the method of Claim 23, which quantizes a predetermined number of orthogonal transformation factors, is statutory. First, image coding is not an abstract idea, and nothing in the statutes or regulations indicates that implementation by a machine is required. If the Examiner disagrees he is respectfully requested to cite authority supporting his position. Second, the method produces a “useful, concrete and tangible result”, e.g., the method outputs rearranged orthogonal transformation factors (in the first scan conversion step) and outputs rearranged quantized orthogonal transformation factors (in the second scan conversion step).

Accordingly, Claim 23 is believed to be directed to statutory subject matter.

Similarly, the computer readable storage medium storing an image coding program as recited in Claim 25 produces a “useful, concrete and tangible result”, e.g., outputting rearranged orthogonal transformation factors (in the code for the first scan conversion step) and outputting rearranged quantized orthogonal transformation factors (in the code for the second scan conversion step).

Further, with respect to Claim 25, MPEP § 2106(IV)(B)(1)(a) states that “a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program’s functionality to be realized, and is thus statutory.” Since Claim 25 recites “a computer readable storage medium storing an image coding program,” it is statutory under Section 101.

Accordingly, Claim 25 is believed to be directed to statutory subject matter. Claims 1, 3, 5, and 7 were rejected under 35 U.S.C. § 102(a) as being anticipated by the so-called “Applicant’s admitted prior art” (the “APA”, see pages 1-9 of the specification). Claims 1, 3, 5, and 7 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,121,216 (*Chen*).

First, cancellation of Claims 5 and 7 renders the rejections of those claims moot.

Claim 1 is directed to an image coder which quantizes a predetermined number of orthogonal transformation factors. A first scan converter is adapted to rearrange the orthogonal transformation factors in a first scan sequence which is different from a zigzag scan sequence and output the predetermined number of the rearranged orthogonal transformation factors at a time. A second scan converter is adapted to rearrange quantized orthogonal transformation factors in the zigzag scan sequence and output the rearranged quantized orthogonal transformation factors. The first scan sequence is a sequence in which odd-numbered samples are arranged in a forward direction from a start of the zigzag scan sequence, and even-numbered samples are arranged in a reverse direction from an end of the zigzag scan sequence, in a scanning order of 8 x 8 DCT coefficients of 1 through 64.

As the Examiner agrees<sup>1</sup>, nothing in the APA, or in *Chen*, would teach or suggest a first scan sequence in which odd-numbered samples are arranged in a forward direction from a start of a zigzag scan sequence, and even-numbered samples are arranged

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<sup>1</sup>As noted above, in a telephone interview between the Examiner and the undersigned attorney on January 22, 2007, the Examiner expressed his tentative agreement that if Claim 1 was amended as set forth herein, it would be distinguishable over the art of record.

in a reverse direction from an end of the zigzag scan sequence, in a scanning order of 8 x 8 DCT coefficients of 1 through 64, as recited in Claim 1.

Accordingly, it is believed clear that Claim 1 is allowable over the APA. It is also believed clear that Claim 1 is allowable over *Chen*.

A review of the other art of record has failed to reveal anything which, in Applicants' opinion, would remedy the deficiencies of the art discussed above, as references against the independent claims herein. Those claims are therefore believed patentable over the art of record.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,



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Raymond A. DiPerna  
Attorney for Applicants  
Registration No.: 44,063

FITZPATRICK, CELLA, HARPER & SCINTO  
30 Rockefeller Plaza  
New York, New York 10112-3801  
Facsimile: (212) 218-2200

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